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APPLICANTS:	A. Soutar and P. McGrath		
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PRELIMINARY AMENDMENT AND REQUEST FOR A DECLARATION OF INTERFERENCE WITH U.S. PATENT NO. 6,200,451

Applicants submit herewith a Preliminary Amendment for the above-identified patent application and a Request for a Declaration of Interference with U.S. Patent No. 6,200,451.

AMENDMENTS

In the Specification:

Please insert the following new paragraph beneath the title and above the heading, "Field of the Invention," on page 1, at line 2:

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Related Applications

This application is a continuation of pending application Serial No. 08/939,656, filed September 29, 1997, which was a continuation of application Serial No. 08/567,885, filed December 8, 1995, which claimed priority to application Serial No. 9425031.3, filed on December 9, 1994, in Great Britain.--

In the Claims:

Please cancel claims 1-17 without prejudice.

Please add the following new claims, 18-31:

18. A process for improving the solderability of a metal surface, said process comprising treating the metal surface with an immersion silver plating solution, said solution comprising:

a). a soluble source of silver ions;

b). an acid;

c). an additive selected from the group consisting of fatty amines, fatty amides, quaternary salts, and ethoxylated versions of any of the foregoing.

19. A process according to claim 18 wherein the silver plating solution also comprises material selected from the group consisting of imidazoles, benzimidazoles, imidazole derivatives and benzimidazole derivatives.

20. A process according to claim 18 wherein the silver plating solution also comprises an oxidant.

21. A process according to claim 18 wherein the metal surface comprises copper.

22. A process according to claim 21 wherein the silver plating solution also comprises a material selected from the group consisting of imidazoles, benzimidazoles, imidazole derivatives, and benzimidazole derivatives.

23. A process according to claim 22 wherein the silver plating solution also comprises an oxidant.

24. An immersion silver plating solution comprising (i) a soluble source of silver ions, (ii) an acid and (iii) an additive selected from the group consisting of an additive selected from the

group consisting of fatty amines, fatty amides, quaternary salts, and ethoxylated versions of any of the foregoing.

25. An immersion plating solution according to claim 24 also comprising a material selected from the group consisting of imidazoles, benzimidazoles, imidazole derivatives, and benzimidazole derivatives.

26. An immersion plating solution according to claim 24 also comprising an oxidant.

27. A process for improving the solderability of a metal surface, said process comprising treating the metal surface with an immersion silver plating solution, said solution comprising:

a). a soluble source of silver ions;

b). an acid; and

c). an additive that substantially prevents silver migration by providing a barrier to moisture.

28. A process for improving the solderability of a metal surface, said process comprising:

a). contacting the metal surface with an immersion silver plating solution thereby producing an immersion silver plate upon the metal surface, and

b). treating the metal surface with a solution comprising an additive that substantially prevents silver migration by providing a barrier to moisture.

29. A process according to claim 28, wherein the solution described in step (b) is distinct from the immersion silver plating solution of step (a), and step (b) is performed after step (a).

30. A process according to claim 28, wherein the additive is a component of the immersion silver plating solution.

31. An immersion silver plating solution comprising (i) a soluble source of silver ions, (ii) an acid and (iii) an additive that substantially prevents silver migration by providing a barrier to moisture.

REMARKS

Amendments to the Specification and Claims

The specification has been amended to reflect the chain of priority for this application. Upon entry of the present amendments, claims 18-31 are pending. Claims 1-17 are cancelled without any intention to abandon any subject matter of these claims. New claims 18, 24, 27, 28 and 31 are in independent form.

Independent claims 18, 27 and 28 cover substantially the same subject matter as claim 1 of U.S. Patent No. 6,200,451. Independent claims 24 and 31 cover substantially the same subject matter as claim 9 of U.S. Patent 6,200,451. Applicants' claims 18 and 24 respectively differ from claims 1 and 9 of U.S. Patent 6,200,451 in that the recited additives in the Markush groups of applicants' claims do not explicitly include amphoteric salts, resinous amines, resinous amides, fatty acids, propoxylated versions of the other additives, or mixtures of the additives; applicants' claim 18 further differs from claim 1 of U.S. Patent 6,200,451 in that the recited list of additives in the Markush group of claim 18 does not explicitly include resinous acids.

All of the recited additives listed in the Markush groups of the independent claims are known to provide barriers to moisture. The present application likewise recognizes the function of these additives in serving as a barrier to moisture and thereby preventing the migration of silver ions.

> Concern over the use of silver plating as described for example in DE-C-4316679 due to migration of silver ions is overcome as it has been found that the present invention substantially prevents silver migration by providing a barrier to moisture.

(Present application, page 19, lines 9-13).

The text of new claims 19-23, 25 and 26 is copied verbatim from claims in U.S. Patent 6,200,451, as follows:

Applicants' Claim	Claim in U.S. Patent 6,200,451
19	2
20	3
21	4
22	6
23	7
25	10
26	11

Claims 5, 8 and 12 of U.S. Patent 6,200,451 are directed to selected ingredients falling within the broader classes of additives recited in the independent claims. These particular embodiments are obvious in view of the broader classes. Accordingly, all of the claims of the pending application and U.S. Patent 6,200,451 are directed to the same patentable invention.

A. Effective Filing Dates

This application is a continuation of pending application Serial No. 08/939,656, filed September 29, 1997, which was a continuation of application Serial No. 08/567,885, filed December 8, 1995, which claimed priority to application Serial No. 9425031.3, filed on December 9, 1994, in Great Britain. The effective filing date of the present application is December 9, 1994.

The filing date of U.S. Patent 6,200,451 was February 17, 1999. No earlier priority date was claimed. Accordingly, the effective filing date of U.S. Patent 6,200,451 is February 17, 1999.

B. 37 C.F.R. §1.607

Applicants submit the following information as required by 37 C.F.R. §§1.607(a)(1)-(a)(5). U.S. Patent 6,200,451 issued on March 13, 2001. This preliminary amendment is being filed on March 13, 2002. Therefore, claims 18-26 of the present application are pending within one year of the issue date of U.S. Patent 6,200,451, and no explanation under 37 C.F.R. §1.607(a)(6) is necessary.

(1) Identification of Patent

In accordance with 37 C.F.R. §1.607(a)(1), Applicants request that an interference be declared between the application filed herewith and U.S. Patent 6,200,451. Moreover, Applicants ask that the examiner consider the following pending applications for inclusion in the interference: (1) USSN 251641, filed February 17, 1999, which is a divisional of U.S. Patent 6,200,451; and (2) USSN 821205, filed March 29, 2001, which is a continuation in part of USSN 251641.

(2) Proposed Counts

In accordance with 37 C.F.R. §1.607(a)(2), Applicants present the following proposed counts (I and II), which correspond to new claims 28 and 31, above.

I. A process for improving the solderability of a metal surface, said process comprising:

a). contacting the metal surface with an immersion silver plating solution thereby producing an immersion silver plate upon the metal surface, and

b). treating the metal surface with a solution comprising an additive that substantially prevents silver migration by providing a barrier to moisture.

II. An immersion silver plating solution comprising (i) a soluble source of silver ions, (ii) an acid and (iii) an additive that substantially prevents silver migration by providing a barrier to moisture.

(3) Corresponding Claims of U.S. Patent 6,200,451

In accordance with 37 C.F.R. §1.607(a)(3), Applicants identify claims 1-8 of U.S. Patent 6,200,451 as corresponding to proposed count I. Applicants further identify claims 9-12 of U.S. Patent 6,200,451 as corresponding to proposed count II

(4) Corresponding Claims of the Present Application

In accordance with 37 C.F.R. §1.607(a)(4), Applicants identify claims 18-23 and 27-30 of the present application as corresponding to proposed count I. Applicants further identify claims 24-26 and 31 of the present application as corresponding to proposed count II. Each of applicants' claims identified as corresponding to proposed count I fall within the scope of proposed count I, and each of applicants' claims identified as corresponding to proposed count II fall within the scope of proposed count II. Accordingly, each Applicants' claims correspond to a proposed count, as indicated above.

(5) Application of Claims 18-31 to the Specification of the Present Application

In accordance with 37 C.F.R. §1.607(a)(5), Applicants submit the following tables that indicate that claims 18-26 are supported by the specification of the application submitted herewith. The citations therein are exemplary only and not exclusive.

Text of Claim 18	Support in Specification of Present Application
A process for improving the solderability of a metal surface, said process comprising treating the metal surface with an immersion silver plating solution, said solution comprising:	Page 11, lines 1-9; page 14, lines 5-13
a). a soluble source of silver ions;	Page 14, lines 18-20
b). an acid;	Page 24, lines 15-17
c). an additive selected from the group consisting of: fatty amines,	Page 22, line 10 ("fatty acid amines")
fatty amides,	Page 22, line 13 ("amides" listed as a type of fatty acid amine)
quaternary salts, and	Page 22, line 14
ethoxylated versions of any of the foregoing,	Page 22, lines 13-15

Text of Claim 19	Support in Specification of Present Application
A process according to claim 18 wherein the silver plating solution also comprises material selected from the group consisting of imidazoles,	Page 23, line 4
benzimidazoles,	Page 23, line 8
imidazole derivatives and	Page 22, line 26; page 23, lines 6-7
benzimidazole derivatives,	Page 23, lines 10-11; page 33, line 6

Text of Claim 20	Support in Specification of Present Application
A process according to claim 18 wherein the silver plating solution also comprises an oxidant.	Page 20, line 23, through page 21, line 26 (complexing agents can act as oxidants)

Text of Claim 21	Support in Specification of Present Application
A process according to claim 18 wherein the metal surface comprises copper.	Page 27, lines 16-18; page 28, lines 6-9

Text of Claim 22	Support in Specification of Present Application
A process according to claim 21 wherein the silver plating solution also comprises material selected from the group consisting of imidazoles,	Page 23, line 4
benzimidazoles,	Page 23, line 8
imidazole derivatives and	Page 22, line 26; page 23, lines 6-7
benzimidazole derivatives,	Page 23, lines 10-11; page 33, line 6

Text of Claim 23	Support in Specification of Present Application
A process according to claim 22 wherein the silver plating solution also comprises an oxidant.	Page 20, line 23, through page 21, line 26 (complexing agents can act as oxidants)

Text of Claim 24	Support in Specification of Present Application
An immersion silver plating solution comprising	Page 14, lines 5-13
(i) a soluble source of silver ions,	Page 14, lines 18-20
(ii) an acid and	Page 24, lines 15-17
(iii) an additive selected from the group consisting of: fatty amines,	Page 22, line 10 ("fatty acid amines")
fatty amides,	Page 22, line 13 ("amides" listed as a type of fatty acid amine)
quaternary salts, and	Page 22, line 14
ethoxylated versions of any of the foregoing,	Page 22, lines 13-15

Text of Claim 25	Support in Specification of Present Application
An immersion plating solution according to claim 24 also comprising a material selected from the group consisting of imidazoles,	Page 23, line 4
benzimidazoles,	Page 23, line 8
imidazole derivatives and	Page 22, line 26; page 23, lines 6-7
benzimidazole derivatives,	Page 23, lines 10-11; page 33, line 6

Text of Claim 26	Support in Specification of Present Application
An immersion plating solution according to claim 24 also comprising an oxidant.	Page 20, line 23, through page 21, line 26 (complexing agents can act as oxidants)

Text of Claim 27	Support in Specification of Present Application
A process for improving the solderability of a metal surface, said process comprising treating the metal surface with an immersion silver plating solution, said solution comprising:	Page 11, lines 1-9; page 14, lines 5-13
a). a soluble source of silver ions;	Page 14, lines 18-20
b). an acid; and	Page 24, lines 15-17
c). an additive that substantially prevents silver migration by providing a barrier to moisture.	Page 19, lines 9-13; page 22, lines 8-20

Text of Claim 28	Support in Specification of Present Application
A process for improving the solderability of a metal surface, said process comprising: a). contacting the metal surface with an immersion silver plating solution thereby producing an immersion silver plate upon the metal surface, and	Page 11, lines 1-9; page 14, lines 5-13
b). treating the metal surface with a solution comprising an additive that substantially prevents silver migration by providing a barrier to moisture.	Page 15, line 24, through page 16, line 6; page 19, lines 9-13; page 22, lines 8-20

Text of Claim 29	Support in Specification of Present Application
A process according to claim 28, wherein the solution described in step (b) is distinct from the immersion silver plating solution of step (a), and step (b) is performed after step (a).	Page 16, lines 24-26

Text of Claim 30	Support in Specification of Present Application
A process according to claim 28, wherein the additive is a component of the immersion silver plating solution.	Page 16, lines 16-19

Text of Claim 31	Support in Specification of Present Application
An immersion silver plating solution comprising	Page 14, lines 5-13
(i) a soluble source of silver ions,	Page 14, lines 18-20
(ii) an acid and	Page 24, lines 15-17
(iii) an additive that substantially prevents silver migration by providing a barrier to moisture.	Page 19, lines 9-13; page 22, lines 8-20

CONCLUSION

Applicants respectfully request that the above amendments be entered and that an interference be declared between the present application and U.S. Patent 6,200,451. If there are

any questions regarding these amendments and remarks, the Examiner is encouraged to contact the undersigned at the telephone number provided below.

Respectfully submitted,

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